We need your help!

Look for dangerous invaders

Zebra mussels *(Dreissena polymorpha)* are native to the Caspian Sea in Asia. They entered the Great Lakes Region via ballast water of a transatlantic vessel in the late 1980s. Within 10 years, these mussels colonized the river basins of the Great Lakes, Mississippi, Tennessee, Hudson, and Ohio. Zebra mussel densities have been reported to be over 700,000 individuals per square meter in some places in the Great Lakes area. The US Fish and Wildlife Service estimates these invaders will have a potential economic impact of $5 billion to the US and Canada within the Great Lakes region alone over the next decade.

Zebra mussels are small, fingernail-sized non-native, invasive species.

A Real Menace

Zebra mussels cause far-reaching damage to water structures and native ecosystems. They attach to manmade structures, particularly pipelines, impeding water movement through hydroelectric turbines and intake structures for drinking water and irrigation systems. They also negatively impact aquatic ecosystems by harming native organisms. In huge numbers, they outcompete other filter feeders, starving them. They adhere to all hard surfaces, including the shells of native mussels, turtles, and crustaceans. In the Midwest they have destroyed boat engines, fouled beaches, and caused damage to boat ramps and docks. Zebra mussel fecal material may also contribute to taste and odor problems in drinking water sources.

Photo by Steve Kyrock

Outboard motor covered with zebra mussels. These creatures can destroy boat engines, render beaches unusable, and clog water filtration pipes.

Stop Hitchhikers

The trailering and passage of boats from one body of water to another has significantly contributed to the rapid spread of zebra mussels. Recreational boaters, anglers, and commercial barges all need to take great care to avoid the transfer of zebra mussel "stowaways." Unfortunately, once a colony of zebra mussels is established in a waterbody, it is nearly impossible to prevent them from spreading elsewhere. The best protection is to keep them from entering Washington waters altogether.

The smaller the mussel, the more likely it is to be inadvertently transported. Although an adult mussel can survive for a week or more in a cool, moist, shaded area, smaller, juvenile mussels and larvae cannot survive out of water for as long. Immature mussels die quite quickly when exposed to drying or the sun. Boats that have been in the water for more than 1 or 2 days in areas with zebra mussels may have mussels attached to their hulls, anchors and chains, trailers, equipment, and engine drive units.

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King County

More often the mussels are found attached to the aquatic plants that have been snagged by props or drive units. These plant fragments are easily transported from waterbody to waterbody, and are a naturally moist and shaded environment

Boaters can help stop the spread of zebra mussels from one waterbody to another by checking their boat, trailer, and gear.

in which mussels can remain alive. The zebra mussel larvae can be inadvertently transported in live wells, in bilges, within the engine cooling systems, and in bait and collection buckets as well.

Always examine a boat for adult zebra mussels immediately after exiting a body of water. Even if none are visible, cleanse the boat thoroughly with fresh water. Rinse the boat at the launch, taking care to clean the bottom and any crevices thoroughly. This will dislodge any mussels that may have settled on the boat. If possible, let the boat dry out for a week as this should kill any of the remaining mussels. Vigorously rinse any gear that has come into contact with lake and river water prior to use elsewhere and always drain live wells before leaving the water.

It's the Law

Not only is it a good practice to guard against so-called hitchhikers on your boat and trailer, as of June, 2002, it's also the law. In Washington state all boats leaving a body of water must be free of aquatic weeds and other debris, otherwise risk being ticketed. Hopefully, this important legislation comes in time to curtail the potential westward spread of zebra mussels and other invasive aquatic nuisance species. Many mid-western and western states are gearing up for the 200th anniversary of the Lewis and Clark Voyage of Discovery, which among other things, will include the transport of boats from infested waterbodies to uninfested waterbodies on the west coast. Of particular concern is the Columbia River Basin, a historical route of the Lewis and Clark expedition. The Columbia River is a vital economic and recreational component to the Pacific Northwest. An infestation of this non-native mussel could have a devastating effect on the region.

Monitors Needed

Preventing the spread of zebra mussels to the West is the primary objective of the **Zebra Mussel Monitoring Network** coordinated by the Center for Lakes & Reservoirs. Volunteers are being sought throughout Washington who have access to lakes and rivers. They will be provided with a PVC substrate to hang on their docks and monthly reply cards. If there is a positive sighting, authorities will be alerted and will determine the extent of colonization.

For information about becoming a volunteer please contact **Toni Pennington**, Zebra Mussel Volunteer Monitoring Coordinator at **(503) 725-9075** or **toni@pdx.edu**. Or contact the Lake Stewardship Volunteer Program at **(206) 296-8008** or **(206) 296-0516**.

Although small, zebra mussels cause big trouble. These mussels can quickly encrust things, such as this crayfish (left). Currently, there are no reported sightings of these creatures in Washington waters, but for how long?